



## **PROXY COST MODELS ARE UNNECESSARY AND INAPPROPRIATE**

**UNIVERSAL SERVICE SUPPORT SHOULD BE EVALUATED BASED ON ACTUAL COSTS FOR LOCAL EXCHANGE NETWORK ACCESS AND THE REVENUES WHICH SUPPORT THESE COSTS. PROXY MODELS PRODUCE HYPOTHETICAL COSTS UNRELATED TO THE ACTUAL COSTS AND REVENUES TO PROVIDE NETWORK ACCESS.**

- Models are not based on real world experience. They produce costs for a hypothetical network which will never be built (and very likely could not be built at the TSLRIC proxy cost) and which will never process a call.
- Models are continuously being revised to incorporate new assumptions, correct errors, etc. When are they correct?
- Models are built on differing sets of inappropriate assumptions about network architecture, network technology, costs to be included, etc.
- Different models (U.S. West Benchmark Cost Model, Hatfield Model, Pacific Bell Cost Proxy Model) produce different results. Each model overstates or understates the necessary costs to deploy a universally available network.

# **PROXY COST MODELS ARE UNNECESSARY** **AND INAPPROPRIATE** (continued)

**PROXIES NEED TO REASONABLY REPLICATE VARIATIONS IN ACTUAL COST FROM STATE TO STATE, WIRE CENTER TO WIRE CENTER, AND BETWEEN COMPANIES.**

- Models do not accomplish this result.
- Before they can be used, they should reasonably replicate actual costs.

**PROXIES MISASSIGN COSTS TO EXISTING LECS.**

- The priceouts use census blocks which do not conform to ownership.

## WHICH COST IS RIGHT ?

LOCAL EXCHANGE COSTS	Actual Costs (per loop, per month)								
		Hatfield Models				Benchmark Cost Models			California Cost Proxy Model (per line, per month)
		Original (per household, per month)	AT&T Version 2.2 Release 1 (per line, per month)	MCI Version 2.2 Release 1 (per line, per month)	AT&T Version 2.2 Release 2 (per line, per month)	BCM (per household, per month)  Expenses based on ARMIS      Hatfield		BCM2 (per line, per month)  Expenses based on ARMIS	
Nationwide		\$21.36				\$23.04	\$16.71	\$29.98	
SWBT - Arkansas	\$39.59					\$24.40	\$17.69	\$34.24	
TOTAL - Arkansas			\$21.76	\$20.82		\$33.56	\$24.34	\$40.97	
SWBT - Kansas	\$35.27				\$20.99	\$23.23	\$16.85	\$29.28	
TOTAL - Kansas			\$20.02	\$19.19		\$33.01	\$23.94	\$35.37	
SWBT - Missouri	\$36.83					\$20.66	\$14.98	\$28.11	
TOTAL - Missouri			\$19.15	\$18.34		\$28.43	\$20.61	\$34.17	
SWBT - Oklahoma	\$36.05					\$19.38	\$14.05	\$30.60	
Total Oklahoma			\$19.62	\$18.77		\$26.59	\$19.29	\$35.06	
SWBT - Texas	\$37.03				\$15.41	\$20.73	\$15.03	\$27.25	\$34.00 EST.
Total Texas			\$16.11	\$15.41		\$25.14	\$18.23	\$29.98	
	1993 Data from USF Data Submission of September, 1995; SWBT Wire Center Study of October, 1995	MCI Hatfield Study July, 1994	AT&T Filing 7/3/96 CC Dkt No. 96-98	MCI Filing 7/7/96 CC Docket Nos. 96-45 & 96-98	AT&T Filing 8/5/96 Kansas Docket No. 190,492-U; AT&T Filing 8/19/96 Texas Dkt # 16226	Joint Sponsors (US West/SPRINT /NYNEX/MCI), 12/1/95 Filing in CC Docket No. 80-286 and SWBT Ex Parte Dated 2/22/96 (default input & output values)		US West/Sprint Ex Parte, 7/3/96 CC Docket No. 96-45 (default input & output values)	reference: Pacific Telesis Filing, 6/3/96 CC Docket No. 96-45; also Data Request response due 8/15/96

# **HATFIELD/TSLRIC MODEL IS INAPPROPRIATE** **AND SUBSTANTIALLY UNDERSTATES** **ACTUAL COSTS**

## **COMPLETE INFORMATION ON MODEL HAS NOT BEEN READILY AVAILABLE.**

- Original Hatfield model provided only nationwide results.
- Later, Hatfield Release 2.2 produced only a total state result.
- Results from the newest version are being filed in State Commission hearings, but apparently not been made available in the federal docket. The model and its assumptions are unavailable to SWBT.

## **INVESTMENT IS SUBSTANTIALLY UNDERSTATED.**

- Network elements necessary to provide service are omitted.
  - The model excludes investments related to motor vehicles and work equipment, and investments associated with plant under construction and materials & supplies.
  - The model only identifies land and building costs for switching-related facilities. The model excludes necessary land and building costs (for central office circuit facilities, etc.).
  - The BCM model, which the Hatfield model uses, to this point has omitted the cable connection costs from the distribution plant to the customer's house (the drop). AT&T claims that in their latest version presumably filed with the FCC (which is unavailable to SWBT for analysis), drop costs are included. It is unclear, consequently, if an appropriate amount is included. Exclusion of these costs could amount to approximately \$400 million in investment for SWBT in Missouri.

**HATFIELD/TSLRIC MODEL IS INAPPROPRIATE**  
**AND SUBSTANTIALLY UNDERSTATES**  
**ACTUAL COSTS**

(continued)

- Costs for installation and support structures are understated. For instance, in reality, trenching cost is essentially the same for large, medium, and small cable sizes. The model loads an average trenching cost per cable pair, understating the placement costs of many of SWBT's cables.
- The Hatfield model relies on the Benchmark Cost Model (BCM) for various elements including fill or capacity utilization. The fill factors are not realistic and can and have been utilized to understate investment in the Hatfield model. Release 2.2 of the Hatfield model used a lower fill factor than the BCM, resulting in higher investment. Finally, the model has not been updated with the latest BCM2 fill which would substantially raise investments.
- The model uses a very conservative rate of return --- well below the authorized federal return.
- The capital recovery assumptions in the model are suspect, if not wrong. Even though much shorter depreciable lives are used, the model calculates depreciation reserves over a 32 year period. This substantially understates net investment.
- The model relies on incorrect input assumptions. For instance, the model assigns entire CBG costs to one LEC, when in fact CBGs are often served by different LECs, and costs should be split among LECs.

**HATFIELD/TSLRIC MODEL IS INAPPROPRIATE**  
**AND SUBSTANTIALLY UNDERSTATES**  
**ACTUAL COSTS**  
(continued)

**EXPENSES ARE SUBSTANTIALLY UNDERSTATED.**

- Maintenance and depreciation expense are calculated based on investment levels. Because investments are understated, the expenses are understated.
- Release 2.2 of the model excludes customer service expenses from its cost calculation, even though customers would still have to order service, inquire about bills, etc.
- The model excludes marketing expenses even though these expenses are required by the Federal Act to advertise the availability of universal services.

**SOUTHWESTERN BELL TELEPHONE COMPANY--MISSOURI**  
**LOCAL EXCHANGE COSTS (SWITCHED SERVICES)**  
**COMPARISON OF HATFIELD MODEL VER 2.2 RELEASE 1 COSTS WITH SWBT 1995 ACTUAL COSTS**

	HATFIELD	SWBT	DIFFERENCE
<b>Direct Facility Invest.</b>			
2 COE	772,590,262	1,099,034,095	(326,443,833)
3 C&WF	606,769,695	1,623,530,880	(1,016,761,185)
4 IOT	38,576,200	75,039,189	(36,462,989)
5 Operator Systems	0	10,938,195	(10,938,195)
6 Total Direct Facility Investment	1,417,936,158	2,808,542,359	(1,390,606,201)
7 COE Reserves	315,663,602	414,319,729	(98,656,127)
8 C&WF Reserves	214,442,005	691,113,304	(476,671,299)
9 IOT Reserves	18,738,464	41,755,355	(23,016,891)
10 Oper Sys Reserves	0	3,818,139	(3,818,139)
11 COE Deferred Taxes	0	179,633,813	(179,633,813)
12 C&WF Deferred Taxes	0	126,187,550	(126,187,550)
13 IOT Deferred Taxes	0	9,255,719	(9,255,719)
14 Oper Sys Deferred Taxes	0	1,708,367	(1,708,367)
15 Total Direct Facility Reserves	548,844,072	1,467,791,976	(918,947,904)
16 Net Investment	869,092,086	1,340,750,383	(471,658,297)
<b>17 Direct Return and Tax</b>	<b>120,305,170</b>	<b>218,646,859</b>	<b>(98,341,689)</b>
<b>Direct Facility Exp.</b>			
18 COE Maint.	23,517,983	51,501,660	(27,983,677)
19 C&WF Maint.	165,606,094	100,644,722	64,961,372
20 IOT Maint.	32,436,533	24,167,753	8,268,780
21 OS Maint.	0	840,582	(840,582)
22 COE Depreciation	51,180,253	96,900,455	(45,720,202)
23 C&WF Depreciation	26,445,107	81,031,311	(54,586,204)
24 IOT Depreciation	4,286,244	5,770,891	(1,484,647)
25 OS Depreciation	0	776,697	(776,697)
26 Network Operations	58,689,208	81,414,395	(22,725,187)
27 Property Tax	0	55,609,139	(55,609,139)
28 Total Direct Expense	362,161,423	498,657,605	(136,496,182)
29 Total Direct Cost	482,466,593	717,304,464	(234,837,871)
<b>Customer Service Related Expense</b>			
30 Customer Service Exp. (1)	0	58,728,955	(58,728,955)
31 Operator Services (1)	0	24,698,115	(24,698,115)
32 Total Customer Services Expenses	0	83,427,069	(83,427,069)
<b>Network and Service Support Investments</b>			
33 Gen. Sup. Fac. Inv.	268,955,188	857,523,914	(588,568,726)
34 Oth. Investment	0	56,278,360	(56,278,360)
35 Gen. Sup.-Def. Taxes	0	100,090,797	(100,090,797)
36 GSF Reserves	136,786,018	255,234,135	(118,448,117)
37 Other Reserves	0	5,938,786	(5,938,786)
38 Net Investment	132,169,170	552,538,556	(420,369,386)
39 Support Investment Return and Tax	20,196,888	90,106,844	(69,909,956)
<b>Network and Service Support Expenses</b>			
40 Depreciation (GSF)	12,921,738	50,842,095	(37,920,357)
41 Amortization	0	4,785,314	(4,785,314)
42 GSF Expenses	(1,104,628)	(17,567,984)	16,463,356
43 Other	0	3,091,947	(3,091,947)
44 Other Taxes	27,804,995	11,816,425	15,988,570
45 Total Support Expenses	39,622,105	52,967,795	(13,345,690)
<b>Common Costs</b>			
46 Marketing	0	23,279,585	(23,279,585)
47 Corporate	54,166,028	94,745,819	(40,579,791)
48 Total Common Costs	54,166,028	118,025,404	(63,859,376)
49 Total Costs	596,451,614	1,061,831,577	(465,379,963)



**SOUTHWESTERN BELL TELEPHONE COMPANY--MISSOURI**  
**LOCAL EXCHANGE COSTS (SWITCHED SERVICES)**  
**COMPARISON OF HATFIELD MODEL VER 2.2 RELEASE 1 COSTS WITH SWBT 1995 ACTUAL COSTS**

	TOTAL EXCLUDING PRIVATE LINE	TOTAL LOCAL	LOOP	SWITCH	TRANSPORT
<b>Direct Facility Invest.</b>					
2 COE	(326,443,833)	(221,190,824)	(126,196,350)	20,943,341	
3 C&WF	(1,016,761,185)	(977,907,510)	NA	(38,853,675)	
4 IOT	0	NA	NA	0	
5 Operator Systems	(10,938,195)	NA	(10,938,195)	0	
6 Total Direct Facility Investment	(1,390,606,201)	(1,235,561,323)	(137,134,545)	(17,910,334)	
7 COE Reserves	(98,656,127)	(82,701,210)	(25,288,289)	9,333,372	
8 C&WF Reserves	(476,671,299)	(463,895,728)	NA	(12,775,570)	
9 IOT Reserves	0	NA	NA	0	
10 Oper Sys Reserves	(3,818,139)	NA	(3,818,139)	0	
11 COE Deferred Taxes	(179,633,813)	(51,685,525)	(111,789,432)	(16,158,856)	
12 C&WF Deferred Taxes	(126,187,550)	(120,061,968)	NA	(6,125,582)	
13 IOT Deferred Taxes	0	NA	NA	0	
14 Oper Sys Deferred Taxes	(1,708,367)	NA	(1,708,367)	0	
15 Total Direct Facility Reserves	(918,947,904)	(750,617,041)	(142,604,227)	(25,726,636)	
16 Net Investment	(471,658,297)	(484,944,282)	5,469,682	7,816,303	
<b>17 Direct Return and Tax</b>	<b>(96,303,174)</b>	<b>(90,923,748)</b>	<b>(5,628,906)</b>	<b>249,480</b>	
<b>Direct Facility Exp.</b>					
18 COE Maint.	(27,983,677)	(5,821,371)	(24,293,654)	2,131,347	
19 C&WF Maint.	64,961,372	67,023,041	NA	(2,061,669)	
20 IOT Maint.	0	NA	NA	0	
21 OS Maint.	(840,582)	NA	(840,582)	0	
22 COE Depreciation	(45,720,202)	(18,308,048)	(25,603,769)	(1,808,385)	
23 C&WF Depreciation	(54,586,204)	(53,919,569)	NA	(666,635)	
24 IOT Depreciation	0	NA	NA	0	
25 OS Depreciation	(776,697)	NA	(776,697)	0	
26 Network Operations	(22,725,187)	(20,063,867)	(3,048,799)	387,479	
27 Property Tax					
<b>28 Total Direct Expense</b>	<b>(136,496,182)</b>	<b>(64,929,295)</b>	<b>(65,651,149)</b>	<b>(5,915,738)</b>	
<b>29 Total Direct Cost</b>	<b>(232,799,356)</b>	<b>(155,853,043)</b>	<b>(71,280,055)</b>	<b>(5,666,258)</b>	
<b>Customer Service Related Expense</b>					
30 Customer Service Exp. (1)	(58,728,955)	(42,442,006)	(12,451,537)	(3,835,412)	
31 Operator Services (1)	(24,698,115)	(17,848,735)	(5,236,420)	(1,612,960)	
<b>32 Total Customer Services Expenses</b>	<b>(83,427,070)</b>	<b>(60,290,741)</b>	<b>(17,687,957)</b>	<b>(5,448,372)</b>	
<b>Network and Service Support Investments</b>					
33 Gen. Sup. Fac. Inv.	(588,568,726)	(519,784,706)	(54,605,198)	(14,178,822)	
34 Oth. Investment	(56,278,360)	(44,210,094)	(8,529,571)	(3,538,695)	
35 Gen. Sup.-Def. Taxes	(100,090,797)	(73,459,306)	(20,697,682)	(5,933,809)	
36 GSF Reserves	(118,448,117)	(123,161,341)	(467,891)	5,181,115	
37 Other Reserves	(5,938,786)	(4,343,136)	(1,194,392)	(401,258)	
38 Net Investment	(420,369,386)	(363,031,018)	(40,774,804)	(16,563,565)	
<b>39 Support Investment Return and Tax</b>	<b>(71,948,472)</b>	<b>(60,263,781)</b>	<b>(7,959,677)</b>	<b>(3,725,014)</b>	
<b>Network and Service Support Expenses</b>					
40 Depreciation (GSF)	(37,920,357)	(32,137,607)	(4,029,286)	(1,753,465)	
41 Amortization	(4,785,314)	(3,499,583)	(962,409)	(323,322)	
42 GSF Expenses	16,463,357	12,458,870	3,059,310	945,177	
43 Other	(3,091,947)	(2,268,672)	(638,100)	(185,175)	
44 Other Taxes	15,988,570	10,191,168	3,632,901	2,164,501	
<b>45 Total Support Expenses</b>	<b>(13,345,691)</b>	<b>(15,255,824)</b>	<b>1,062,417</b>	<b>847,716</b>	
<b>Common Costs</b>					
46 Marketing	(23,279,585)	(16,823,597)	(4,935,668)	(1,520,320)	
47 Corporate	(40,579,791)	(31,575,224)	(8,496,578)	(507,988)	
<b>48 Total Common Costs</b>	<b>(63,859,376)</b>	<b>(48,398,821)</b>	<b>(13,432,246)</b>	<b>(2,028,308)</b>	
<b>49 Total Costs</b>	<b>(465,379,963)</b>	<b>(340,062,211)</b>	<b>(109,297,519)</b>	<b>(16,020,235)</b>	

SOUTHWESTERN BELL TELEPHONE COMPANY--MISSOURI  
LOCAL EXCHANGE COSTS (SWITCHED SERVICES)  
HATFIELD MODEL VER 2.2 RELEASE 1 RESULTS

	TOTAL EXCLUDING PRIVATE LINE	TOTAL LOCAL	LOOP	SWITCH	TRANSPORT
<b>Direct Facility Invest.</b>					
2 COE		772,590,262	210,748,650	422,847,655	138,993,957
3 C&WF		606,769,695	566,811,547	NA	39,958,148
4 IOT		38,576,200	38,576,200	NA	NA
5 Operator Systems		0	NA	0	NA
6 Total Direct Facility Investment		1,417,936,158	816,136,397	422,847,655	178,952,105
7 COE Reserves		315,663,602	99,573,337	159,030,159	57,060,106
8 C&WF Reserves		214,442,005	193,668,538	NA	20,773,468
9 IOT Reserves		18,738,464	18,738,464	NA	NA
10 Oper Sys Reserves		0	NA	0	NA
11 COE Deferred Taxes		0	0	0	0
12 C&WF Deferred Taxes		0	0	NA	0
13 IOT Deferred Taxes		0	0	NA	NA
14 Oper Sys Deferred Taxes		0	NA	0	NA
15 Total Direct Facility Reserves		548,844,072	311,980,339	159,030,159	77,833,574
16 Net Investment		869,092,086	504,156,058	263,817,496	101,118,532
17 <b>Direct Return and Tax</b>		<b>120,305,170</b>	<b>68,970,229</b>	<b>36,091,113</b>	<b>15,243,828</b>
<b>Direct Facility Exp.</b>					
18 COE Maint.		23,517,983	5,748,207	11,544,332	6,225,443
19 C&WF Maint.		165,606,094	162,782,119	0	2,823,975
20 IOT Maint.		32,436,533	32,436,533	NA	NA
21 OS Maint.		0	NA	NA	NA
22 COE Depreciation		51,180,253	21,074,865	21,289,947	8,815,441
23 C&WF Depreciation		26,445,107	23,178,201	0	3,266,906
24 IOT Depreciation		4,286,244	4,286,244	NA	NA
25 OS Depreciation		0	NA	NA	NA
26 Network Operations		58,689,208	39,411,016	13,184,039	6,094,153
27 Property Tax		0			
28 <b>Total Direct Expense</b>		<b>362,161,423</b>	<b>288,917,186</b>	<b>46,018,318</b>	<b>27,225,919</b>
29 <b>Total Direct Cost</b>		<b>482,466,593</b>	<b>357,887,415</b>	<b>82,109,431</b>	<b>42,469,747</b>
<b>Customer Service Related Expense</b>					
30 Customer Service Exp. (1)		0	0	0	0
31 Operator Services (1)		0	0	0	0
32 <b>Total Customer Services Expenses</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Network and Service Support Investments</b>					
33 Gen. Sup. Fac. Inv.		268,955,188	109,574,974	122,721,360	36,658,854
34 Oth. Investment		0	0	0	0
35 Gen. Sup.-Def. Taxes		0	0	0	0
36 GSF Reserves		136,786,018	64,161,801	52,311,734	20,312,483
37 Other Reserves		0	0	0	0
38 Net Investment		132,169,170	45,413,172	70,409,626	16,346,371
39 <b>Support Investment Return and Tax</b>		<b>20,196,888</b>	<b>7,830,183</b>	<b>10,606,787</b>	<b>1,759,918</b>
<b>Network and Service Support Expenses</b>					
40 Depreciation (GSF)		12,921,738	5,176,763	6,484,303	1,260,671
41 Amortization		0	0	0	0
42 GSF Expenses		(1,104,628)	(434,743)	(573,557)	(96,328)
43 Other		0	0	0	0
44 Other Taxes		27,804,995	18,877,029	6,105,690	2,822,276
45 <b>Total Support Expenses</b>		<b>39,622,105</b>	<b>23,619,049</b>	<b>12,016,436</b>	<b>3,986,620</b>
<b>Common Costs</b>					
46 Marketing		0	0	0	0
47 Corporate		54,166,028	37,961,261	11,095,820	5,108,948
48 <b>Total Common Costs</b>		<b>54,166,028</b>	<b>37,961,261</b>	<b>11,095,820</b>	<b>5,108,948</b>
49 <b>Total Costs</b>		<b>596,451,614</b>	<b>427,297,907</b>	<b>115,828,473</b>	<b>53,325,234</b>

\* Property Tax not identifiable in study, probably included in other taxes.

**SOUTHWESTERN BELL TELEPHONE COMPANY--MISSOURI**  
**LOCAL EXCHANGE COSTS (SWITCHED SERVICES)**  
**MISSOURI 1995 WIRE CENTER COST STUDY**

	TOTAL EXCLUDING PRIVATE LINE	TOTAL LOCAL	LOOP	SWITCH	TRANSPORT
<b>Direct Facility Invest.</b>					
2 COE	1,099,034,095	431,939,474	549,044,005	118,050,616	
3 C&WF	1,623,530,880	1,544,719,057	NA	78,811,823	
4 IOT	75,039,189	75,039,189	NA	NA	
5 Operator Systems	10,938,195	NA	10,938,195	NA	
6 Total Direct Facility Investment	2,808,542,359	2,051,697,720	559,982,200	196,862,439	
7 COE Reserves	414,319,729	182,274,547	184,318,448	47,726,734	
8 C&WF Reserves	691,113,304	657,564,266	NA	33,549,038	
9 IOT Reserves	41,755,355	41,755,355	NA	NA	
10 Oper Sys Reserves	3,818,139	NA	3,818,139	NA	
11 COE Deferred Taxes	179,633,813	51,685,525	111,789,432	16,158,856	
12 C&WF Deferred Taxes	126,187,550	120,061,968	NA	6,125,582	
13 IOT Deferred Taxes	9,255,719	9,255,719	NA	NA	
14 Oper Sys Deferred Taxes	1,708,367	NA	1,708,367	NA	
15 Total Direct Facility Reserves	1,467,791,976	1,062,597,380	301,634,386	103,560,210	
16 Net Investment	1,340,750,383	989,100,340	258,347,814	93,302,229	
17 <b>Direct Return and Tax</b>	<b>218,646,859</b>	<b>159,893,977</b>	<b>41,720,019</b>	<b>14,994,348</b>	
<b>Direct Facility Exp.</b>					
18 COE Maint.	51,501,660	11,569,578	35,837,986	4,094,096	
19 C&WF Maint.	100,644,722	95,759,078	NA	4,885,644	
20 IOT Maint.	24,167,753	24,167,753	NA	NA	
21 OS Maint.	840,582	NA	840,582	NA	
22 COE Depreciation	96,900,455	39,382,913	46,893,716	10,623,826	
23 C&WF Depreciation	81,031,311	77,097,770	NA	3,933,541	
24 IOT Depreciation	5,770,891	5,770,891	NA	NA	
25 OS Depreciation	776,697	NA	776,697	NA	
26 Network Operations	81,414,395	59,474,883	16,232,838	5,706,674	
27 Property Tax	55,609,139	40,623,615	11,087,648	3,897,876	
28 <b>Total Direct Expense</b>	<b>498,657,605</b>	<b>353,846,481</b>	<b>111,669,467</b>	<b>33,141,657</b>	
29 <b>Total Direct Cost</b>	<b>717,304,464</b>	<b>513,740,458</b>	<b>153,389,486</b>	<b>48,136,005</b>	
<b>Customer Service Related Expense</b>					
30 Customer Service Exp. (1)	58,728,955	42,442,006	12,451,537	3,835,412	
31 Operator Services (1)	24,698,115	17,848,735	5,236,420	1,612,960	
32 <b>Total Customer Services Expenses</b>	<b>83,427,069</b>	<b>60,290,741</b>	<b>17,687,957</b>	<b>5,448,372</b>	
<b>Network and Service Support Investments</b>					
33 Gen. Sup. Fac. Inv.	857,523,914	629,359,680	177,326,558	50,837,676	
34 Oth. Investment	56,278,360	44,210,094	8,529,571	3,538,695	
35 Gen. Sup.-Def. Taxes	100,090,797	73,459,306	20,697,682	5,933,809	
36 GSF Reserves	255,234,135	187,323,142	52,779,625	15,131,368	
37 Other Reserves	5,938,786	4,343,136	1,194,392	401,258	
38 Net Investment	552,538,556	408,444,190	111,184,430	32,909,936	
39 <b>Support Investment Return and Tax</b>	<b>90,106,844</b>	<b>68,093,964</b>	<b>18,566,464</b>	<b>5,484,932</b>	
<b>Network and Service Support Expenses</b>					
40 Depreciation (GSF)	50,842,095	37,314,370	10,513,589	3,014,136	
41 Amortization	4,785,314	3,499,583	962,409	323,322	
42 GSF Expenses	(17,567,984)	(12,893,613)	(3,632,867)	(1,041,505)	
43 Other	3,091,947	2,268,672	638,100	185,175	
44 Other Taxes	11,816,425	8,685,861	2,472,789	657,775	
45 <b>Total Support Expenses</b>	<b>52,967,795</b>	<b>38,874,873</b>	<b>10,954,019</b>	<b>3,138,904</b>	
<b>Common Costs</b>					
46 Marketing	23,279,585	16,823,597	4,935,668	1,520,320	
47 Corporate	94,745,819	69,536,485	19,592,398	5,616,936	
48 <b>Total Common Costs</b>	<b>118,025,404</b>	<b>86,360,082</b>	<b>24,528,066</b>	<b>7,137,256</b>	
49 <b>Total Costs</b>	<b>1,061,831,577</b>	<b>767,360,118</b>	<b>225,125,992</b>	<b>69,345,469</b>	

# Unit Cost by Network Element

Missouri

SOUTHWESTERN BELL - MO

## A. Loop elements

	0 - 5	5 - 200	200 - 650	650 - 850	850 - 2550	> 2550	Totals	
<b>Loop Distribution</b>								
Annual Cost	\$ 10,499,828	\$ 89,874,139	\$ 58,270,454	\$ 19,125,523	\$ 147,132,260	\$ 71,627,322	\$ 396,529,326	\$ 396,529,326
Units	25,700	408,542	397,780	144,215	1,195,368	643,380	2,812,984	
Unit Cost/month	\$ 34.05	\$ 18.42	\$ 12.21	\$ 11.05	\$ 10.28	\$ 9.28	\$ 11.75	
<b>Loop Concentration</b>								
Annual Cost	\$ 2,838,677	\$ 20,268,318	\$ 14,418,790	\$ 4,285,941	\$ 25,332,570	\$ 7,361,840	\$ 74,606,134	\$ 74,606,134
Units	25,700	408,542	397,780	144,215	1,195,368	643,380	2,812,984	
Unit Cost/month	\$ 9.53	\$ 4.15	\$ 3.02	\$ 2.48	\$ 1.77	\$ 0.95	\$ 2.21	
<b>Loop Feeder</b>								
Annual Cost	\$ 587,648	\$ 3,194,361	\$ 2,381,887	\$ 929,988	\$ 11,650,711	\$ 7,631,529	\$ 26,376,123	\$ 26,376,123
Units	25,700	408,542	397,780	144,215	1,195,368	643,380	2,812,984	
Unit Cost/month	\$ 1.91	\$ 0.65	\$ 0.50	\$ 0.54	\$ 0.81	\$ 0.99	\$ 0.78	
<b>Total Loop</b>								
Annual Cost	\$ 14,025,953	\$ 113,338,818	\$ 75,071,131	\$ 24,341,452	\$ 184,115,540	\$ 86,620,690	\$ 497,511,583	\$ 497,511,583
Units	25,700	408,542	397,780	144,215	1,195,368	643,380	2,812,984	
Unit Cost/month	\$ 45.48	\$ 23.23	\$ 15.73	\$ 14.07	\$ 12.84	\$ 11.22	\$ 14.74	
<b>Total lines</b>	25,700	408,542	397,780	144,215	1,195,368	643,380	2,812,984	
<b>Total lines served by DLC</b>	25,700	382,096	278,758	82,397	485,442	135,555	1,389,849	
	Annual Cost	Units		Unit Cost				
<b>End office switching</b>	\$ 119,824,663							
1. Port	\$ 35,947,399	2,264,835	switched lines	\$ 1.32	per line/month			
2. Usage	\$ 83,877,264	39,498,911,389	minutes	\$ 0.0021	per minute			
<b>Signalling network elements</b>	\$ 12,170,810							
links	\$ 102,645		link	\$ 19.09	per link per month			
STP	\$ 10,481,718	3,620,952,112	TCAP + ISUP messages	\$ 0.00289	per message			
SCP	\$ 1,606,447	201,149,200	TCAP messages	\$ 0.00799	per message			
<b>Transport network elements</b>								
1. Dedicated	\$ 112,944,668	712,648	trunks	\$ 13.21	per DS-O equivalent/month			
Switched	\$ 26,070,629	164,498						
Special	\$ 86,874,039	548,150		\$ 0.00131	per minute			
2. Common	\$ 12,981,152	2,520,651,122	minutes	\$ 0.00528	per minute per leg (orig or term)			
3. Tandem switch	\$ 3,781,901	2,140,624,776	minutes	\$ 0.0018	per minute			
inv								
<b>Operator systems</b>	\$ 7,342,907	n/a						
<b>Total</b>	\$ 749,543,657							
<b>Total wholesale cost per switched line</b>	\$ 21.44							

## **U.S. WEST BENCHMARK (BCM) OR THE BCM2 MODELS ARE INAPPROPRIATE AND MISSTATE ACTUAL COSTS**

**DESPITE THEIR CLAIMS, NEITHER MODEL ACTUALLY USE  
CENSUS BLOCK GROUPS (CBGs).**

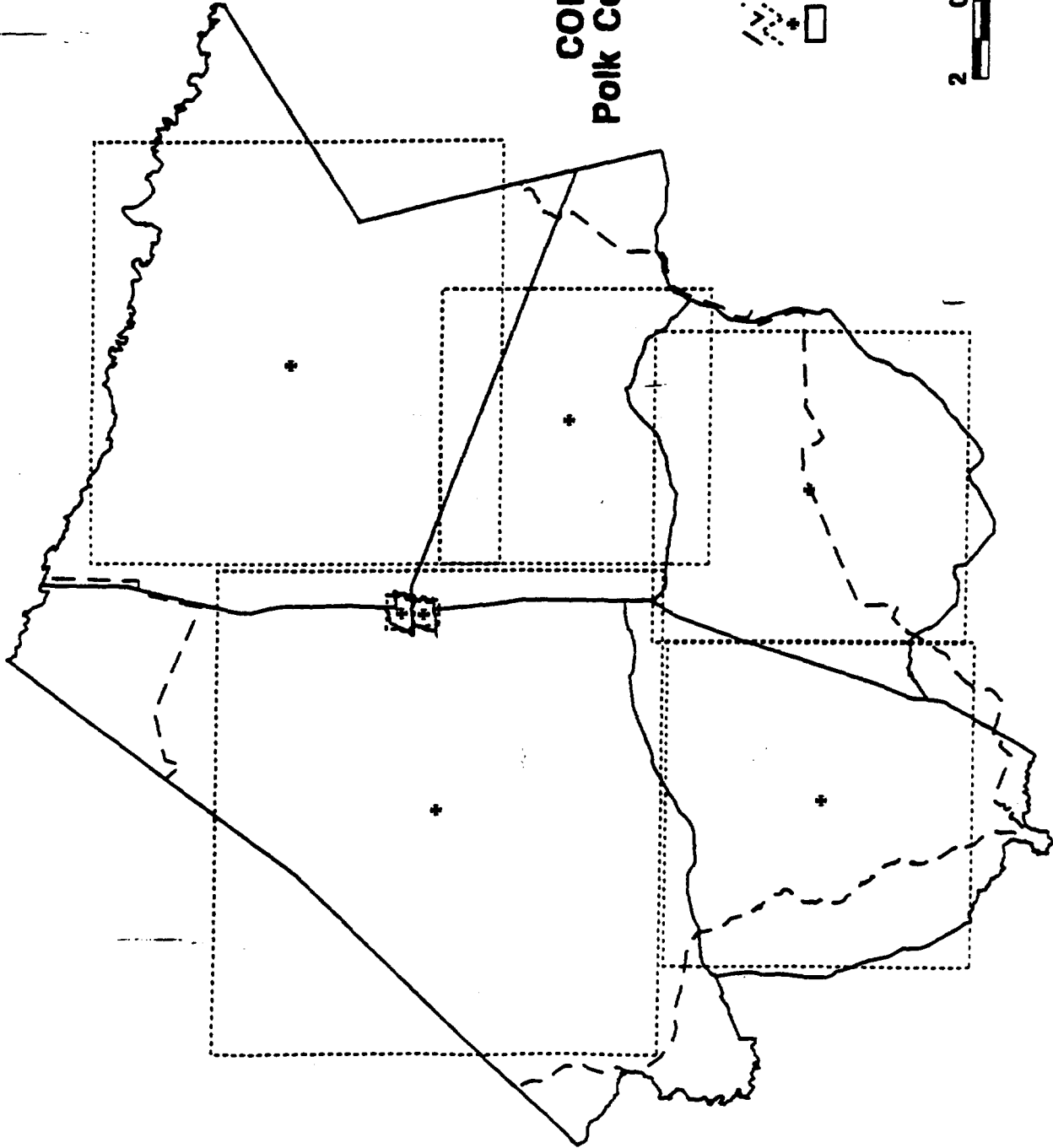
- These models assume that the CBG boundaries are square in order to facilitate calculations. Most CBGs are irregular in shape. Both voids and overlaps are created when assumed CBG boundaries are actually mapped to the true CBG boundaries. These voids and overlaps result in the costs being determined on an assumed equivalent square CBG, thereby distorting the level of support necessary for the actual service area. Further misallocation of costs among LECs results from the fact that LECs service areas/customer locations may be significantly different than the area mapped by the CBG. All CBG costs are assigned to a LEC, not multiple LECs serving a CBG.
- ▶ The CBG boundaries do not coincide with existing LEC serving areas, nor are they likely to coincide with the service areas of new entrants. As a result, any proxy that employs a CBG approach would require that the serving eligible carriers all map their customers to the CBG boundaries described in the particular model, in order to determine the support per customer. SWBT, and presumptively most other LECs, do not presently have this detailed customer mapping. This would be an expense that would have to be incurred in connection with this hypothetical approach.

**U.S. WEST BENCHMARK (BCM) OR THE**  
**BCM2 MODELS ARE INAPPROPRIATE AND**  
**MISSTATE ACTUAL COSTS**

(continued)

- Many of the concerns expressed in the previous section on the Hatfield model regarding investment assumptions, fill factors, expense loadings, etc. also apply to the BCM models, and are not repeated here.

**CORRIGAN Wire Center  
Polk County Texas FIPS 48373**



Wire Center Boundary  
Square Area of Block Group  
Block Group Centroid  
Block Group Boundary



2 0 2 Miles

# COMPARISON OF ACTUAL COSTS TO BCM2 COSTS BY MISSOURI LEC

	SWBT Study Local Exchange Costs, per Line, per Mo.	BCM2 Costs, per Line, Per Mo.	HATFIELD Study Release 2.2, Version1, AT&T - 7/3/96
<b>MISSOURI</b>			
ALLTEL MISSOURI INC	\$53.02	\$67.67	NA
ALMA TELEPHONE CO	\$54.21	\$72.77	NA
BOURBEUSE TEL CO	\$37.84	\$58.04	NA
BPS TELEPHONE CO	NA	\$56.18	NA
CASS COUNTY TEL CO	NA	\$55.13	NA
CHARITON VALLEY TEL	\$50.26	\$70.60	NA
CHOCTAW TELEPHONE CO	\$46.51	\$90.81	NA
CITIZENS TEL CO - MO	\$54.83	\$43.23	NA
CONTEL AR DBA GTE AR	NA	\$85.64	NA
CONTEL MO DBA GTE MO	\$59.59	\$56.34	NA
CRAW-KAN TEL COOP-MO	\$53.34	\$72.47	NA
EASTERN MISSOURI TEL	\$41.58	\$70.71	NA
ELLINGTON TEL CO	\$56.35	\$107.13	NA
FARBER TEL CO	\$64.63	\$98.02	NA
FIDELITY TEL CO	\$42.21	\$42.43	NA
GOODMAN TEL CO	\$36.25	\$52.90	NA
GRANBY TELEPHONE CO	\$37.84	\$51.90	NA
GRAND RIVER MUTUAL	\$46.12	\$72.69	NA
GREEN HILLS TEL CORP	\$58.95	\$75.92	NA
GTE NORTH INC - MO	\$41.46	\$40.55	NA
GTE SOUTHWEST - AR	NA	\$120.38	NA
HOLWAY TEL CO	\$74.49	\$83.80	NA
IAMO TEL CO	\$58.40	\$72.99	NA
KANSAS STATE TEL -MO	NA	\$43.55	NA
KINGDOM TELEPHONE CO	\$58.49	\$66.33	NA
KLM TELEPHONE CO	\$53.96	\$66.53	NA
LATHROP TELEPHONE CO	\$37.84	\$50.49	NA
LE-RU TELEPHONE CO	\$85.95	\$73.55	NA
MARK TWAIN RURAL TEL	\$58.53	\$83.51	NA
MCDONALD CO TEL CO	\$37.84	\$55.46	NA
MID-MISSOURI TEL CO	\$58.60	\$75.83	NA
MILLER TEL CO INC	\$37.84	\$77.29	NA
MISSOURI TEL CO	\$39.21	\$65.48	NA
MO-KAN DIAL INC	\$41.29	\$62.38	NA
NE MISSOURI RURAL	\$74.75	\$82.53	NA
NEW FLORENCE TEL CO	\$49.88	\$73.03	NA
NEW LONDON TEL CO	\$56.62	\$55.43	NA
ORCHARD FARM TEL CO	\$111.65	\$49.82	NA
OREGON FARM MUTUAL	\$37.84	\$69.74	NA
OZARK TELEPHONE CO	NA	\$48.29	NA
PEACE VALLEY TEL CO	\$53.84	\$94.23	NA
ROCK PORT TEL CO	\$37.84	\$66.54	NA
SENECA TEL CO	\$37.84	\$50.67	NA
SOUTHWESTERN BELL	\$39.95	\$28.11	NA
STEELVILLE TEL EXCH	\$47.86	\$97.28	NA
STOUTLAND TEL CO	\$54.31	\$97.13	NA
UNITED TEL CO OF MO	\$42.51	\$42.36	NA
WHEELING TEL COMPANY	\$68.60	\$97.26	NA
<b>TOTAL MISSOURI</b>	<b>\$40.40</b>	<b>\$34.17</b>	<b>\$19.15</b>



**SWBT--MISSOURI**  
**COMPARISON OF ACTUAL SWBT LOCAL EXCHANGE COST**  
**BY WIRE CENTER TO BCM 2 COSTS BY WIRE CENTER**

per Line per Month

Exchange #	SWBT Study	BCM 2 Study
1	294.41	\$34.14
2	249.01	n/a
3	226.16	\$60.99
4	195.93	\$112.87
5	179.93	\$63.65
6	175.51	\$61.59
7	169.12	\$87.19
8	170.59	\$67.37
9	171.85	\$66.73
10	182.19	\$26.18
11	155.03	\$89.73
12	156.09	\$63.05
13	152.37	\$65.30
14	154.85	\$94.03
15	150.44	n/a
16	140.78	\$60.88
17	137.35	\$70.89
18	139.08	\$63.80
19	137.41	\$67.47
20	135.93	\$61.19
21	132.12	\$54.08
22	135.61	\$47.09
23	126.89	\$104.89
24	139.83	\$36.35
25	137.90	\$54.16
26	130.29	\$83.11
27	119.89	\$53.69
28	120.30	\$40.94
29	114.05	\$43.95
30	114.40	\$58.41
31	116.92	\$78.47
32	109.94	\$91.21
33	106.79	\$64.92
34	104.01	\$49.63
35	105.11	\$57.32
36	105.17	\$63.80
37	104.12	\$63.69
38	106.44	\$83.37
39	102.33	\$58.30
40	100.19	\$69.04
41	98.90	\$61.38
42	97.96	\$52.25
43	97.09	\$67.99
44	100.41	\$39.95
45	98.15	\$65.74

**SWBT--MISSOURI**  
**COMPARISON OF ACTUAL SWBT LOCAL EXCHANGE COST**  
**BY WIRE CENTER TO BCM 2 COSTS BY WIRE CENTER**

per Line per Month

Exchange #	SWBT Study	BCM 2 Study
46	95.94	\$77.15
47	96.61	\$67.11
48	94.17	\$74.48
49	91.55	\$32.84
50	95.07	\$73.73
51	95.07	\$85.89
52	91.96	\$42.09
53	88.12	\$57.56
54	90.85	\$63.30
55	87.57	\$51.00
56	89.61	\$47.16
57	86.61	\$72.69
58	87.99	\$41.91
59	97.82	\$43.53
60	84.58	\$51.40
61	84.26	n/a
62	87.06	\$59.42
63	81.92	\$41.05
64	85.65	\$79.89
65	78.56	\$56.94
66	81.73	\$65.19
67	83.23	\$53.87
68	82.88	\$51.08
69	79.21	\$41.41
70	80.44	\$57.91
71	79.37	\$78.50
72	76.04	\$38.45
73	80.52	\$41.66
74	76.44	\$66.72
75	77.06	\$40.03
76	76.12	\$77.01
77	75.64	\$78.88
78	78.68	\$83.12
79	75.06	\$65.64
80	71.24	\$59.39
81	73.81	\$66.19
82	80.37	\$49.82
83	72.73	\$45.10
84	71.66	\$35.35
85	71.33	\$60.91
86	73.50	\$34.23
87	69.50	\$38.41
88	71.85	\$35.80
89	73.72	\$37.98
90	80.22	\$49.28

**SWBT--MISSOURI**  
**COMPARISON OF ACTUAL SWBT LOCAL EXCHANGE COST**  
**BY WIRE CENTER TO BCM 2 COSTS BY WIRE CENTER**

per Line per Month

Exchange #	SWBT Study	BCM 2 Study
91	73.29	\$71.38
92	81.04	\$46.59
93	74.22	\$29.78
94	76.57	\$54.58
95	69.34	\$41.51
96	78.16	\$41.21
97	67.51	\$48.02
98	72.44	\$41.72
99	63.23	\$39.45
100	68.20	\$34.69
101	64.20	\$36.10
102	60.17	\$33.56
103	70.69	\$50.02
104	64.11	\$32.50
105	63.75	\$37.82
106	58.89	\$38.59
107	73.66	\$68.21
108	52.69	\$50.69
109	79.12	\$38.75
110	77.01	\$41.10
111	59.43	\$73.59
112	70.86	\$39.23
113	56.55	\$49.71
114	51.06	\$32.41
115	50.26	\$56.70
116	53.47	\$42.82
117	56.72	\$86.18
118	47.34	\$52.54
119	55.26	\$34.77
120	48.66	\$33.85
121	60.53	\$33.95
122	52.70	\$29.51
123	48.28	\$29.38
124	45.68	\$44.09
125	51.05	\$33.24
126	48.90	\$40.19
127	50.09	\$36.71
128	52.62	\$29.31
129	44.34	\$32.79
130	46.76	\$28.56
131	42.00	\$41.46
132	52.70	\$33.75
133	46.24	\$33.55
134	67.97	\$44.80
135	44.46	\$32.60

**SWBT--MISSOURI**  
**COMPARISON OF ACTUAL SWBT LOCAL EXCHANGE COST**  
**BY WIRE CENTER TO BCM 2 COSTS BY WIRE CENTER**  
per Line per Month

Exchange #	SWBT Study	BCM 2 Study
136	44.43	\$32.84
137	44.07	\$44.40
138	40.65	\$35.05
139	42.18	\$34.18
140	39.63	\$30.48
141	45.00	\$29.83
142	50.19	\$26.06
143	39.20	\$45.86
144	42.79	\$35.22
145	39.41	\$32.81
146	42.22	\$34.75
147	37.41	\$38.26
148	35.30	\$37.92
149	39.72	\$29.73
150	40.88	\$31.75
151	42.85	\$27.80
152	40.45	\$27.24
153	37.28	\$26.70
154	36.24	\$34.49
155	44.33	\$25.89
156	44.46	\$32.71
157	36.30	\$27.81
158	37.26	\$28.62
159	47.92	\$32.71
160	38.14	\$27.00
161	36.79	\$27.49
162	36.17	\$25.03
163	36.16	\$27.80
164	30.51	\$24.72
165	35.72	\$27.68
166	38.69	\$29.15
167	38.65	\$27.54
168	45.83	\$27.63
169	32.81	\$28.65
170	32.99	\$26.08
171	35.86	\$25.29
172	30.68	\$29.26
173	28.28	\$31.98
174	37.01	\$25.87
175	49.58	\$28.01
176	40.49	\$29.37
177	26.44	\$30.44
178	28.74	\$27.48
179	26.25	\$26.62
180	27.46	\$26.55

**SWBT--MISSOURI**  
**COMPARISON OF ACTUAL SWBT LOCAL EXCHANGE COST**  
**BY WIRE CENTER TO BCM 2 COSTS BY WIRE CENTER**  
per Line per Month

Exchange #	SWBT Study	BCM 2 Study
181	25.09	\$26.32
182	27.83	\$23.05
183	23.48	\$26.12
184	23.95	n/a
185	20.75	\$26.08
186	26.26	\$23.34
187	33.39	\$24.10
188	37.49	\$27.83
189	26.54	\$26.13
190	21.98	\$23.69
191	22.57	\$32.06
192	17.60	\$23.79
193	30.12	\$23.20
194	25.77	\$24.29
195	24.05	\$22.01
196	23.95	\$24.44
197	27.01	\$26.94
198	33.75	\$23.09
199	32.60	\$22.15
200	24.39	\$24.31
201	17.41	\$30.36
202	39.44	\$22.85
203	19.52	\$21.59
204	25.12	\$24.55
205	23.86	\$22.33
206	28.65	\$23.37
207	36.19	\$15.73
208	17.54	\$24.50
209	21.92	\$19.97
210	21.62	\$18.91
211	14.77	\$21.69
212	25.93	\$16.08

## **PACIFIC BELL/INDETEC COST PROXY MODEL** **CANNOT BE EVALUATED**

SWBT purchased model output for Texas and compared it with SWBT's actual cost study. However, the model logic is proprietary and not available for review. Consequently, SWBT is unable to determine why the model produces differing results from actuals.

# COMPARISON OF ACTUAL INVESTMENT TO BCM2 & CPM

Investment per line in Dollars

WC #	SWBT ACTUAL STUDY	Preliminary BCM2 Results	BCM2 as a Percent of ACTUAL	Preliminary CPM Results	CPM as a Percent of ACTUAL
1	1,332.62	1,166.80	87.56%	975.94	73.23%
2	680.44	838.73	123.26%	1,087.99	159.89%
3	2,069.40	1,240.90	59.96%	1,462.71	70.68%
4	2,041.26	1,228.89	60.20%	1,465.87	71.81%
5	2,207.14	1,946.93	88.21%	2,017.69	91.42%
6	1,481.01	1,625.33	109.74%	1,922.82	129.83%
7	739.59	784.84	106.12%	1,037.70	140.31%
8	3,192.04	1,807.31	56.62%	2,289.14	71.71%
9	2,031.26	1,227.00	60.41%	1,649.13	81.19%
10	1,121.61	1,322.62	117.92%	1,176.53	104.90%
11	1,825.19	2,423.53	132.78%	2,403.68	131.70%
12	7,297.56	4,469.20	61.24%	9,306.56	127.53%
13	883.57	837.91	94.83%	1,181.37	133.70%
14	1,174.49	1,169.86	99.61%	1,610.55	137.13%
15	2,849.38	1,725.75	60.57%	1,990.42	69.85%
16	1,050.19	842.81	80.25%	1,243.50	118.41%
17	1,077.38	1,445.65	134.18%	1,724.75	160.09%
18	3,960.39	1,593.09	40.23%	1,668.28	42.12%
19	1,210.41	925.72	76.48%	965.77	79.79%
20	3,306.81	1,545.03	46.72%	5,813.43	175.80%
21	909.81	794.95	87.37%	1,211.51	133.16%
22	1,063.59	813.98	76.53%	1,207.24	113.51%
23	1,458.86	4,356.07	298.59%	993.38	68.09%
24	3,273.76	1,441.52	44.03%	1,874.11	57.25%
25	840.63	415.54	49.43%	1,052.60	125.22%
26	1,839.87	1,835.62	99.77%	2,107.35	114.54%
27	1,230.13	826.62	67.20%	1,653.62	134.43%
28	1,359.13	949.77	69.88%	1,560.22	114.80%
29	6,510.30	2,525.59	38.79%	2,638.22	40.52%
30	1,021.35	1,159.71	113.55%	1,823.26	178.51%
31	721.09	714.84	99.13%	1,065.58	147.77%
32	1,451.61	1,109.99	76.47%	1,406.47	96.89%
33	1,284.02	1,111.79	86.59%	1,306.88	101.78%
34	1,386.47	1,837.44	132.53%	2,138.72	154.26%
35	1,303.78	750.90	57.59%	1,396.21	107.09%

# COMPARISON OF ACTUAL INVESTMENT TO BCM2 & CPM

Investment per line in Dollars

WC #	SWBT ACTUAL STUDY	Preliminary BCM2 Results	BCM2 as a Percent of ACTUAL	Preliminary CPM Results	CPM as a Percent of ACTUAL
36	1,894.30	1,101.67	58.16%	1,875.18	98.99%
37	1,174.48	853.64	72.68%	1,195.85	101.82%
38	1,794.21	1,075.39	59.94%	1,672.39	93.21%
39	684.34	531.12	77.61%	781.30	114.17%
40	3,250.33	1,812.77	55.77%	2,498.70	76.88%
41	4,265.52	2,863.18	67.12%	7,402.91	173.55%
42	1,599.42	1,191.48	74.49%	1,587.66	99.26%
43	2,863.52	2,739.04	95.65%	1,727.91	60.34%
44	770.25	730.18	94.80%	1,216.03	157.88%
45	2,771.43	3,224.51	116.35%	4,574.71	165.07%
46	2,094.10	2,345.14	111.99%	1,938.16	92.55%
47	1,353.40	1,461.61	108.00%	1,855.12	137.07%
48	2,288.07	2,261.30	98.83%	3,209.15	140.26%
49	3,867.88	1,995.30	51.59%	7,078.23	183.00%
50	1,568.29	1,201.96	76.64%	1,412.01	90.03%
51	1,468.01	1,033.52	70.40%	1,917.57	130.62%
52	1,356.99	856.71	63.13%	1,547.66	114.05%
53	1,727.67	1,003.78	58.10%	1,112.02	64.37%
54	1,725.29	1,134.92	65.78%	1,393.55	80.77%
55	690.46	714.16	103.43%	789.27	114.31%
56	1,015.18	886.93	87.37%	1,302.03	128.26%
57	2,158.47	1,934.68	89.63%	1,895.33	87.81%
58	1,232.32	1,109.97	90.07%	1,437.98	116.69%
59	828.80	802.17	96.79%	1,027.30	123.95%
60	3,752.69	1,790.21	47.70%	2,281.10	60.79%
61	2,009.91	1,429.33	71.11%	1,408.38	70.07%
62	854.83	975.18	114.08%	1,463.10	171.16%
63	3,854.41	2,836.92	73.60%	9,081.94	235.62%
64	2,495.43	3,816.00	152.92%	4,277.63	171.42%
65	764.90	767.33	100.32%	1,313.95	171.78%
66	894.69	868.46	97.07%	1,106.62	123.69%
67	1,154.44	1,065.11	92.26%	1,456.88	126.20%
68	1,808.30	1,148.56	63.52%	1,360.52	75.24%
69	2,838.80	1,520.67	53.57%	3,026.82	106.62%
70	1,387.40	1,644.49	118.53%	1,605.40	115.71%



# COMPARISON OF ACTUAL INVESTMENT TO BCM2 & CPM

Investment per line in Dollars

WC #	SWBT ACTUAL STUDY	Preliminary BCM2 Results	BCM2 as a Percent of ACTUAL	Preliminary CPM Results	CPM as a Percent of ACTUAL
71	1,985.39	2,208.86	111.26%	2,361.55	118.95%
72	1,646.19	1,000.28	60.76%	1,282.57	77.91%
73	2,669.53	3,924.68	147.02%	7,056.51	264.34%
74	1,335.57	1,103.71	82.64%	1,447.66	108.39%
75	4,216.75	2,822.24	66.93%	2,512.06	59.57%
76	899.92	666.42	74.05%	944.35	104.94%
77	843.43	918.88	108.95%	1,268.22	150.37%
78	1,303.13	1,190.78	91.38%	1,333.47	102.33%
79	2,310.09	1,585.36	68.63%	1,412.25	61.13%
80	1,330.43	1,052.96	79.14%	1,227.98	92.30%
81	967.61	1,233.57	127.49%	1,829.71	189.10%
82	683.27	928.85	135.94%	1,173.44	171.74%
83	1,959.51	1,206.67	61.58%	1,890.45	96.48%
84	953.81	903.19	94.69%	1,233.75	129.35%
85	1,937.54	2,090.47	107.89%	4,150.16	214.20%
86	1,858.50	2,053.01	110.47%	1,927.73	103.72%
87	2,834.64	2,480.41	87.50%	2,553.49	90.08%
88	1,673.59	938.26	56.06%	1,389.88	83.05%
89	4,482.28	3,269.56	72.94%	2,600.49	58.02%
90	1,194.78	864.09	72.32%	1,212.00	101.44%
91	1,002.11	951.03	94.90%	1,272.34	126.97%
92	2,018.63	1,388.06	68.76%	1,654.50	81.96%
93	1,127.84	885.72	78.53%	1,200.22	106.42%
94	1,570.10	1,248.41	79.51%	1,702.72	108.45%
95	850.82	910.98	107.07%	1,179.48	138.63%
96	5,049.45	1,838.86	36.42%	2,059.64	40.79%
97	796.37	734.00	92.17%	1,078.56	135.44%
98	2,925.76	1,147.71	39.23%	2,759.78	94.33%
99	944.98	719.87	76.18%	999.14	105.73%
100	1,230.80	1,121.37	91.11%	1,352.57	109.89%
101	1,823.88	1,121.79	61.51%	1,474.81	80.86%
102	671.96	554.58	82.53%	941.63	140.13%
103	2,395.11	1,858.68	77.60%	2,579.66	107.71%
104	1,396.45	1,158.11	82.93%	1,286.23	92.11%
105	876.99	1,148.14	130.92%	1,293.24	147.46%